

Q Sustain Ltd

Specialist Consultants to the Built Environment

- Energy Management
- Design & Project Management
- Building Services Engineering
- Asset Management/Surveys
- Renewable & Low Carbon Technology
- Combined Heat and Power (CHP)
- BREEAM Methodology
- Site Sustainability/Environmental Consultancy
- Glare Analysis & Distraction risk for train drivers
- ICT and Digital Media procurement
- Asset Protection Agreement – Trackside Developments
- Air Quality Strategy and Action Plans

CELEBRATING
CONSTRUCTION
2016
WINNER

edie
Awards
2015
FINALIST



RAIL PARTNERSHIP
AWARDS Highly commended 2018



Welcome to Q Sustain

Q Sustain Ltd is an independent award-winning specialist consultancy to the construction industry offering strategic support across many sectors. With a rich and well-established history within the rail industry and large clients such as Network Rail, Virgin Trains, developers such as B&K, U&I and Downing, Q Sustain is able to initiate and deliver key projects, such as the Birmingham New Street Station redevelopment which was the first BREEAM rated station and first to install a Combined Heat & Power (CHP) plant led by us. By utilising Q Sustain's expertise in design, procurement, contract and implementation of the whole CHP process meant that the District Heating Network (DHN) could be vastly expanded, providing low carbon heat to other parts of the city and reducing the station's carbon footprint, estimated at approximately 3,700 Tons / year.

Q Sustain is able to provide specialist and innovative solutions to assist in the feasibility, design and implementation stages of low carbon projects across all technologies, including CHP, wind, solar PV, batteries and even demand side response.

Q Sustain also leads on new forward-thinking strategies such as a sustainability strategy for the Great Northern Rail Project, which encompasses energy and carbon, waste, materials, social and community impact and ecology and biodiversity. Introducing these strategies and others like the Air Quality Action Plan (for Birmingham New Street), which was praised by Network Rail's Managing Director and regulator (ORR) and a CHP/DHN feasibility study for Manchester City Council is at the core of Q Sustain's ethos to drive positive change in today's dynamic environment and environmental challenges.

Energy, Design and Project Management

Due to our knowledge of building services systems with Chartered CIBSE Engineers, we can survey assets, large and small and provide key information of how your building or asset can save money in energy bills but also review the Building Fabric in terms of heat losses. We can also provide information on the return on Investments from the incorporation of low carbon technology. But we don't stop there! We can then help design and manage any implementation of our recommendations from concept to completion.

Our core service is managing large multi-discipline design teams, combining engineering expertise and experience in Building Services design with project management tools following PRINCE 2 and APM best Practice.



Asset Management Surveys

We have the ability and experience to assess the condition of assets such as mechanical and electrical plant and systems within small or large buildings, be they offices or train stations. We can assist in the technical Due Diligence for the acquisition or sale of assets and input into key asset reports.



Renewable/Low Carbon Technology

We can assist in the feasibility studies, design and implementation of low carbon technology from ground source heat pumps, wind turbines, solar PV and Combined Heat and Power, creating studies to support BREEAM deliverables or simply to assist a low carbon development.

Q Sustain managed the design, procurement, contract and implementation of the first CHP plant to be installed in a main train station. This allowed the huge expansion of the city district heating network. Q Sustain and Network Rail received recognition and awards for pursuing a very challenging scheme with the engine mounted on the roof of the station.



Case Study – Birmingham New Street Station

Q Sustain helped deliver Birmingham New Street Station's £650 million redevelopment, which was a hugely complicated project built in many phases over a five year delivery programme and required the station to keep running its trains at all times. Q Sustain utilised innovative solution to reduce the carbon footprint and use the latest technologies.

Q Sustain provided project engineering support for delivery of the project, working to Network Rail processes, procedures and standards. We assisted in the delivery of many of the retail spaces, supervising the fit-out and also help procure the large curved LED advertising screens.

We also helped deliver the Grand Central Shopping Centre, that is located above the station along with the shell and core for John Lewis' biggest store outside of London, located to the south of the station.



Case Study – Virgin Trains Low Carbon Study

Our client, Virgin Trains, contacted us regarding feasibility studies for an ambitious and industry-leading project with the goal to create carbon neutral railway stations in support of many ongoing rail and global initiatives to achieve net-zero carbon emissions. Stoke-On-Trent and Oxenholme Lake District were identified as the first two stations to target, with the hope they would provide good examples for future stations to follow.

Innovate energy efficiency improvements and bespoke low carbon technology packages were created to optimise the station's energy use and lower the carbon footprints as much as possible, while still presenting a viable business case for the client.



BREEAM Methodology

Q Sustain have BREEAM Accredited Professionals and the first BRE Accredited Site Sustainability Manager. Both credentials can acquire additional BREEAM credits to most registered schemes. We have delivered the first BREEAM 'Excellent' trackside building on the railway and the first BREEAM 'Very Good' rated station. We have expertise of delivering BREEAM credits in the most complicated projects such as Birmingham New Street Station.



Case Study – BREEAM & CHP

Network Rail, delivery partner Mace, designers, Atkins and Sustainability Consultants Q Sustain Ltd have successfully implemented the first BREEAM 'Very Good' rated rail station, as well as delivering the first BREEAM 'Excellent' rated accommodation for Cross Country Trains (called The Lampblock) on platform 1.

These initiatives at New Street have set a new benchmark in Network Rail of how to adapt and create innovative sustainable solutions in complex rail environments that include an 80m long green wall, rainwater harvesting systems, predicted to supply 60% of toilet flushing demand from recovered rainwater, and LED Lighting with close control.

Over 12,500 tons of concrete was removed from a disused car park and the roof. All the waste concrete removed from the site was taken to a waste recycling facility for use on other projects and avoid waste to landfill.

The station is the first to install a Combined Heat and Power (CHP) plant and led the way to significantly expand a city district heating network with modelled reduction of 3,000Tons carbon / year. Such a scheme shall reduce the cities carbon emissions and assist neighbouring businesses and developments with the option for a greener fuel source, creating a carbon smart and energy wise station.



Site Sustainability / Environmental Consultancy – HS2

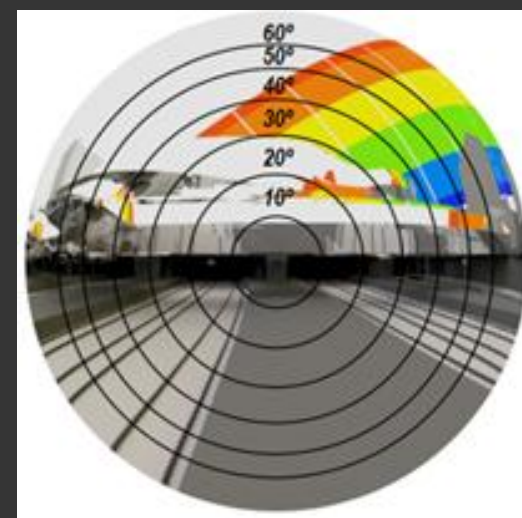
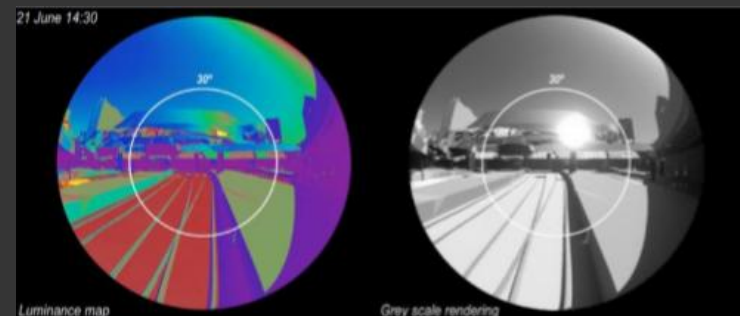
Q Sustain are assisting Network Rail in creating and managing Environmental Strategies, management plans, impact assessments and assessing third party Design Environmental Management Plans for major elements of enabling works to allow the High Speed 2 rail to connect or pass via the Network Rail Infrastructure. Q Sustain have considerable experience in managing Environmental Strategies and engaging with the supply chain and contractors to ensure Client needs and strategies are successfully implemented and included within contracts.



Glare Analysis

Q Sustain understands the type of risk developments with any reflective properties can create close to live rail infrastructure and train drivers. If there are any track signals located in the vicinity of a development that a train driver is required to have clear visibility at all times increases the risk of affecting the safety of the operational rail should any glare from adjacent developments be experienced.

Q Sustain have managed very complex glare analysis schemes working closely with expert teams interpreting the analysis, outputs and interfacing and satisfying Network Rail requirements along with verification with signal sighting committees on schemes such as Birmingham New Street Station. Q Sustain is also advising and carrying out glare studies for multiple developments in the Nine Elms area of London.



ICT and Digital Media

Q Sustain Ltd were embedded in the Network Rail governance team and helped procure, design, appoint a supplier and project manage the installation of all three digital LED Media Screens working closely with advertising company Signature Outdoor and Ocean. Q Sustain also managed the agreement and delivery of the ICT strategy at New Street Station, installing the first Interactive screens on a main station providing up to date train information and assist city wayfinding.

Q Sustain are also assisting Birmingham City Council in implementing the Digital City and Railway vision and Smart Station technology that can assist the wider city in connectivity and efficiency.



Rail Asset Protection Agreement

Developing adjacent to the National Rail Infrastructure requires careful governance and in many cases, the developer needs to agree to protecting the railway under an Asset Protection Agreement. This requires key competencies to be satisfied during the design of any temporary or permanent works. Q Sustain can provide such competencies and advisory for such developments and help unlock value and assist the Client through the Asset Protection process and the standards required to adhere to.

Our Services for such developments can include Review of the Risk Assessments and Method Statement document for the development and provide The CRE / CEM (Contractor Resident Engineer and Contractor Engineering Manager) role required as a key competency under any Asset Protection Agreement and would be an integral and crucial service to provide the Client with a seamless interface with Network Rail and satisfy Network Rail's competency requirements.



Air Quality

Q Sustain Ltd have provided the Network Rail Senior management team with an action plan that has been endorsed by the rail regulator (ORR) and confirmed the legal requirements and obligations for air quality within a station.

Q Sustain directly advise Network Rail at an executive level on issues surrounding air quality.

Q Sustain are closely engaged with the Rolling Stock Operating Companies in respect of R&D and innovation for hybrid battery trains.



Just Some of Our Clients



Get in Touch Today

Please Email Our Team to See
How Q Sustain Can Help You:

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